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IS 2336 (1963): Stainless Steel Milk Vats [FAD 19: Dairy Products and Equipment]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS : 2336 - 1963

(Reaffirmed ~~2000~~
2009)

Indian Standard

SPECIFICATION FOR STAINLESS STEEL MILK VATS

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR STAINLESS STEEL MILK VATS

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Indian Standard

SPECIFICATION FOR STAINLESS STEEL MILK VATS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 18 April 1963, after the draft finalized by the Dairy Industry Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 The milk vat is used for collection or storage of milk at the reception point and other places in the dairy. The construction of the milk vat should be such that the milk remains hygienic and retains all its natural properties.

0.3 This standard covers milk vats of 500, 1 000, 1 500, and 2 000 litres capacity, which are used in the milk collection centres and small and medium-sized dairies.

0.4 Wherever a reference to any Indian Standard appears in this specification, it shall be taken as a reference to the latest version of the standard.

0.5 Metric system has been adopted in India and all quantities and dimensions in this standard have been given in this system.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS:2-1960 Rules for Rounding Off Numerical Values (*Revised*). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

0.7 This standard is intended chiefly to cover the technical provisions relating to stainless steel milk vats, and it does not include all the necessary provisions of a contract.

1. SCOPE

1.1 This standard prescribes the important constructional details and dimensional requirements for stainless steel milk vats of capacities of 500, 1 000, 1 500, and 2 000 litres, designed to collect or store milk prior to its processing or despatch.

IS : 2336 - 1963

2. MATERIAL

2.1 All the component parts shall be made of stainless steel conforming to Grade 07Cr 19Ni9 of IS : 1570-1961 Schedules for Wrought Steels for General Engineering Purposes.

3. SHAPE AND DIMENSIONS

3.1 The vats shall generally conform to the shape and dimensions shown in Fig. 1. Slight variations in the dimensions are permissible provided the capacity is within the specified limits.

4. CAPACITY

4.1 The rated capacity is the capacity of the vat 'Z' mm below the brim (see Table in Fig. 1). A tolerance of ± 5 percent shall be allowed on the rated capacity.

5. FABRICATION

5.1 Vat

5.1.1 All surfaces which come into contact with the milk shall be finished smooth. All inside corners shall be rounded off to a radius of not less than 6 mm.

5.1.2 All joints which come in contact with the milk shall be welded and finished smooth and shall be water-tight.

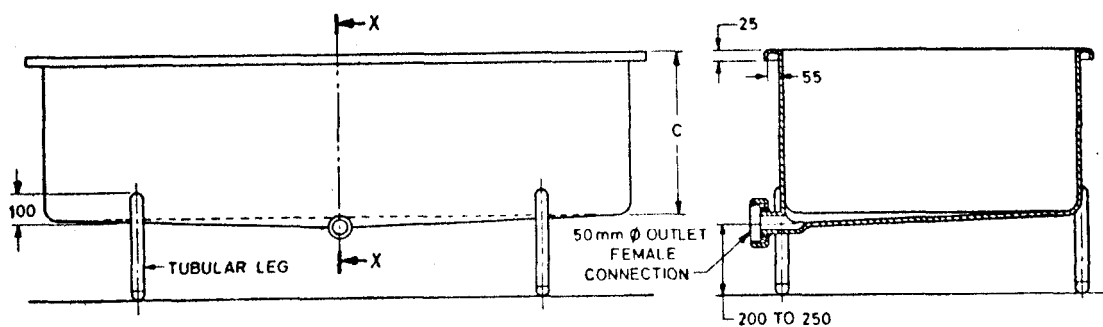
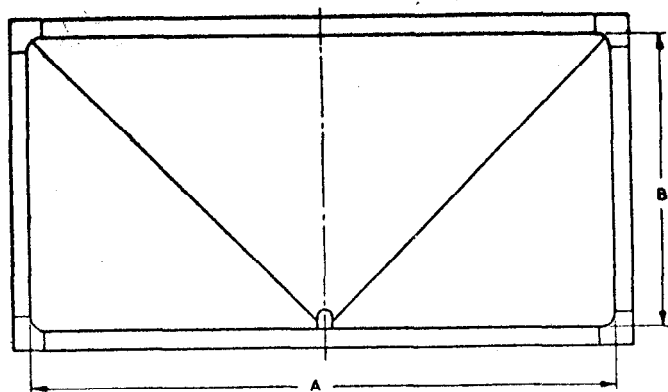
5.1.3 The vat shall be provided with a 50-mm outlet female connection. The outlet shall be of such a design that all parts are easily accessible for thorough cleaning and capable of being maintained in hygienic condition. The outlet shall be fitted on the long side of the vat as shown in Fig. 1. It may, however, be fitted on the short side, if agreed to by the purchaser.

5.1.4 The sides of the vat shall be flanged as shown in Fig. 1.

5.1.5 The milk vats shall be provided with four or more stainless steel tubular legs. The legs shall be securely welded to the sides and shall be provided with adjustable ball feet made of stainless steel.

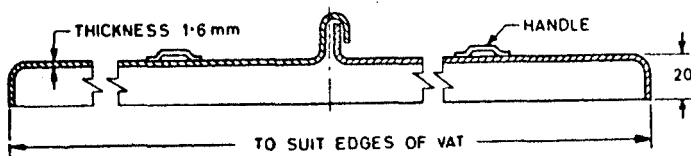
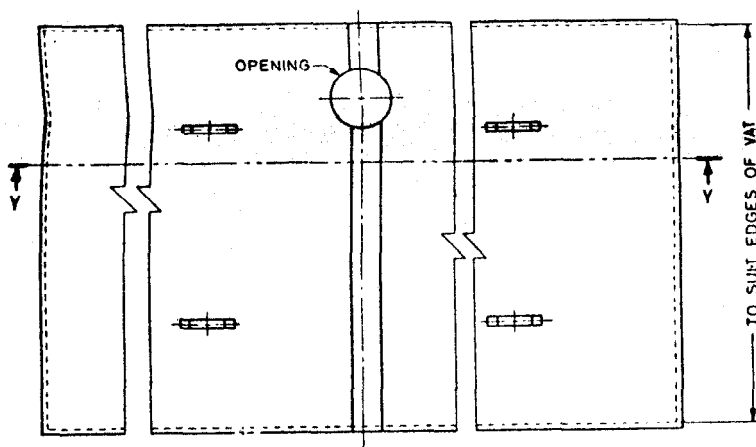
5.2 Vat Cover

5.2.1 The cover of 500-litre vat shall be in one piece and those of the remaining sizes shall be in two pieces. The vat covers shall be fitted with two rigid handles. The covers shall be sloped to provide drainage from the surface and fit over the edges of the parts they cover.



VAT

SECTION XX



SECTION YY

COVER (ENLARGED)

CAPACITY LITRES	A	B	C	'Z'	THICKNESS OF SHEET
500	1 500	1 000	375	50	1.6
1 000	2 000	1 000	545	50	1.6
1 500	2 200	1 200	620	62	2.0
2 000	2 400	1 400	655	62	2.5

All dimensions in millimetres.

FIG. 1 MILK VAT, STAINLESS STEEL

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5.2.2 The cover shall be suitably strengthened by panelling or other means to avoid buckling.

5.2.3 The two sections of the covers of 1 000-, 1 500- and 2 000-litre vats shall be so designed and shaped that they could be suitably overlapped to prevent any inflow of liquid or entry of foreign matter from external sources.

5.2.4 If the purchaser requires the vats to be used in conjunction with weighing bowls, then the covers shall be provided with a suitable opening. In this case, the cover of 500-litre vat may be made in two sections and those of the other sizes in three sections.

5.3 Bottom of the Vat — The bottom of the vat shall be suitably sloped towards the outlet so as to ensure quick and complete drainage.

5.4 Vats with Two Compartments — If the purchaser so desires, the vats may be fabricated with two compartments. The capacity of a double compartment vat refers to the total capacity, that is, the capacity of both the compartments taken together.

5.4.1 In case of a two-compartment vat, two outlet connections shall be provided and the bottom of each compartment shall be sloped towards its outlet.

5.5 Welding — All the welds shall be of satisfactory quality and they shall be free from porosity and brittleness. If filler rods are used, they shall be of the same material as the sheets welded.

5.6 Outlet Valve or Cock — The vat shall be supplied with a suitable stainless steel valve or cock, if required by the purchaser. The design of the valve or cock shall be such that there is no chance of milk pockets being formed within their body or fittings.

6. TESTS

6.1 Leakage Test — The vat shall be leak-proof.

7. MARKING

7.1 Each vat shall be indelibly marked with the following information:

- a) Manufacturer's name, trade-mark or initials;
- b) Identification number; and
- c) Capacity of the vat.

7.1.1 Each vat may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	Unit	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	Unit	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	Unit	Symbol	Definition
Force	newton	N	1 N = 1 kg.m/s ²
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m ²
Frequency	hertz	Hz	1 Hz = 1 c/s (s ⁻¹)
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	Pascal	Pa	1 Pa = 1 N/m ²

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